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10/691,006	10/22/2003	Tsukasa Takemura	JP920020154US1	5681

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EXAMINER
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TO, JENNIFER N

ART UNIT	PAPER NUMBER
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2195

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01/25/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/691,006

Applicant(s)

TAKEMURA, TSUKASA

Examiner

Jennifer N. To

Art Unit

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Claims 1-18 are pending for examination.

#### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 6-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

4. Claims 6-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to a program product containing a plurality of source codes for scheduling task. Thus it is directed to a program itself, not a process occurring as a result of executing the program, a machine programmed to operate in accordance with the program nor manufacture structurally and functionally interconnected with the program in a manner which enables the program to act as a computer component and realize its functionality. Therefore, it is directed to non-statutory subject matter.

5. Claims 13-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to system claim, but appearing to be comprised of software alone without claiming associated computer hardware required for execution. Therefore, it is directed to non-statutory subject matter.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-12, and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. The claim language in the following claims is not clearly understood:

- i. as per claim 1, lines 4-5, it is not clearly understood what is meant by "extracting classes forming said system from design information thereof" (i.e. extracting classes forming said system from design information).
- ii. as per claim 5, lines 3-4, it is not clearly understood what is meant by "estimated the workload of the classes in a multi-regression analysis" (i.e. estimated the workload of the classes based on their past performance).
- iii. as per claims 4, 6, 10, 16, they are rejected for the same reason as claims 1, 5 above. Appropriate corrections are required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2195

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-10, and 13-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Cohen et al. (hereafter Cohen) (U.S. Patent No. 6011918).

9. As per claim 1, Cohen teaches the invention as claimed including a scheduling method for scheduling tasks providing a system designed on an object-oriented basis by using a computer (abstract; col. 4, lines 38-40), comprising:

a first step of extracting classes forming said system from design information thereof, generating tasks corresponding to the extracted classes, and storing information on the generated tasks into a given storage device (abstract; col. 3, lines 11-28; col. 4, lines 26-29, the client applicants , and server application here referred as tasks);

a second step of extracting dependency between the classes from the design information of said system, setting the dependency between the corresponding tasks on the basis of the dependency, and storing information on the set dependency between the tasks into the given storage device (abstract; col. 3, lines 44-60; col. 9, lines 11-34); and

a third step of scheduling the tasks on the basis of the information on the tasks stored in said given storage device and the information on the dependency between the tasks (abstract; col. 18, lines 45-55).

10. As per claim 2, Cohen teaches that wherein, if given classes have a relation in which a development of one class requires an earlier development of the other class in said second step, the dependency is set in such a way that a task corresponding to one class concerned is started after termination of a task corresponding to the other class concerned (abstract; col. 3, lines 44-60; col. 9, lines 11-34).

11. As per claim 3, Cohen teaches that wherein, if given classes have an interdependence relation in said second step, the dependency is set in such a way that each task is terminated after awaiting tasks corresponding to all the classes in the interdependence to be ready to terminate (abstract; col. 3, lines 44-60; col. 9, lines 11-34).

12. As per claims 4, Cohen teaches the invention as claimed including a scheduling method for scheduling tasks providing a system designed on an object-oriented basis by using a computer (abstract; col. 4, lines 38-40), comprising:

a first step of extracting classes forming said system from design information thereof, generating tasks corresponding to the extracted classes, and

Art Unit: 2195

storing information on the generated tasks into a given storage device (abstract; col. 3, lines 11-28; col. 4, lines 26-29, the client applicants , and server application here referred as tasks);

a second step of extracting complexity of the classes from the design information of said system, estimating workload required for implementation of the classes on the basis of the complexity, and storing a result of the workload estimation into the given storage device (abstract; col. 3, lines 44-51; col. 4, lines 1-8; the weight here referred as workload); and

a third step of scheduling the tasks on the basis of the information on the tasks stored in said given storage device and the result of the workload estimation (abstract; col. 18, lines 45-55).

13. As per claim 5, Cohen teaches that wherein, in said second step, past workload achievements in each class are used to estimate the workload of the classes in a multi-regression analysis col. 3, lines 44-51.

14. As per claims 6-10, and 13-16, they are rejected for the same reason as claims 1-5 above.

15. Claims 1-3, and 6-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Avvari et al., (hereafter Avvari) (U.S. Patent No. 6978401).

Art Unit: 2195

16. As per claim 1, Avvari teaches the invention including a scheduling method for scheduling tasks providing a system designed on an object-oriented basis by using a computer, comprising:

a first step of extracting classes forming said system from design information thereof, generating tasks corresponding to the extracted classes, and storing information on the generated tasks into a given storage device (extracting classes as forming the application call tree, col. 5, lines 13-29; based on said call tree, generating tasks (tasks as test cases) corresponding to the extracted classes (each task (each test case) performs testing functions on specific classes TC1 for a-b, TC2 for a-F-b; fig. 7C, Test Cases TC1 - TC17 as tasks corresponding with extracted classes);

a second step of extracting dependency between the classes from the design information of said system, setting the dependency between the corresponding tasks on the basis of the dependency, and storing information on the set dependency between the tasks into the given storage device (dependency between classes as the application call tree; breaking down the application call tree and associating them with test cases; fig. 8F, TC1-TC22); and

a third step of scheduling the tasks on the basis of the information on the tasks stored in said given storage device and the information on the dependency between the tasks Scheduling the tasks as arranging the test cases in some test suite, FIG. 12A, blocks 1216/yes --> 1218, fig. 10, executing test suite with suitable test cases).



Art Unit: 2195

17. As per claim 2, Avvari teaches that wherein, if given classes have a relation in which a development of one class requires an earlier development of the other class in said second step, the dependency is set in such a way that a task corresponding to one class concerned is started after termination of a task corresponding to the other class concerned (col. 11, line 33 through col. 12, line 5).

18. As per claim 3, Avvari teaches that wherein, if given classes have an interdependence relation in said second step, the dependency is set in such a way that each task is terminated after awaiting tasks corresponding to all the classes in the interdependence to be ready to terminate (col. 11, line 33 through col. 12, line 5).

19. As per claims 6-8, they are rejected for the same reason as claims 1-3 above.

20. Claims 1-3, 6-8, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Moulden et al. (hereafter Moulden) (U.S. Patent No. 7039912).

21. As per claim 1, Moulden teaches the invention including a scheduling method for scheduling tasks (scheduling test cases providing a system designed on an object-oriented basis by using a computer (abstract), comprising:

Art Unit: 2195

a first step of extracting classes forming said system from design information thereof, generating tasks corresponding to the extracted classes, and storing information on the generated tasks into a given storage device (col. 8, lines 45-54; col. 9, line 64 through col. 10, lines 29);

a second step of extracting dependency between the classes from the design information of said system, setting the dependency between the corresponding tasks on the basis of the dependency, and storing information on the set dependency between the tasks into the given storage device (col. 2, lines 25-29; col. 3, lines 1-7; col. 6, lines 17-23; col. 9, lines 30-34; col. 10, lines 30-46; col. 21, lines 4-7); and

a third step of scheduling the tasks on the basis of the information on the tasks stored in said given storage device and the information on the dependency between the tasks (col. 22, lines 26-27, executing the test cases).

22. As per claim 2, Moulden teaches that wherein, if given classes have a relation in which a development of one class requires an earlier development of the other class in said second step, the dependency is set in such a way that a task corresponding to one class concerned is started after termination of a task corresponding to the other class concerned (col. 2, lines 25-29; col. 3, lines 1-7; col. 6, lines 17-23; col. 9, lines 30-34; col. 10, lines 30-46; col. 21, lines 4-7).

23. As per claim 3, Moulden teaches that wherein, if given classes have an interdependence relation in said second step, the dependency is set in such a

Art Unit: 2195

way that each task is terminated after awaiting tasks corresponding to all the classes in the interdependence to be ready to terminate (col. 21, lines 4-7).

24. As per claims 6-8, they are rejected for the same reason as claims 1-3 above.

25. As per claim 12, Moulden teaches that wherein a class diagram described in UML.TM. is used as said system design information in said first and second processes (col. 12, lines 54-64).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

26. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moulden et al. (hereafter Moulden) (U.S. Patent No. 7039912), as applied in claim 6 above, and in view of Charisius et al., (hereafter Charisius) (U.S. Patent No. 6938240).

27. As per claim 11, Moulden teaches the invention substantially as claimed in claim 6. Moulden did not specifically teach the step of generating and outputting

Art Unit: 2195

a Gantt chart having a description of said task schedule generated in said third process.

28. However, Charisius teaches it is well known in the art for one to generate and output a Gantt chart having a description of said task (col. 1, line 51 through col. 2, lines 5).

29. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have combined the teaching of Moulden and Charisius because both of Moulden and Charisius invention directs to system for use in the software development area, and it is also obvious to one of an ordinary skill in the art to use Gantt chart in Moulden's system to generate and output schedule for test cases to be executed by the developer.

30. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen et al. (hereafter Cohen) (U.S. Patent No. 6011918), as applied in claim 13 above, and in view of Charisius et al., (hereafter Charisius) (U.S. Patent No. 6938240).

31. As per claim 17, Cohen teaches that invention substantially as claimed in claim 13. However, Cohen did not specifically teach the step of generating and outputting a Gantt chart having a description of said task schedule generated in said third process.

Art Unit: 2195

32. However, Charisius teaches it is well known in the art for one to generate and output a Gantt chart having a description of said task (col. 1, line 51 through col. 2, lines 5).

33. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have combined the teaching of Cohen and Charisius because both of Cohen and Charisius invention directs to system for use in the software development area, and it is also obvious to one of an ordinary skill in the art to use Gantt chart in Cohen's system to generate and output schedule for test cases to be executed by the developer.

34. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen et al. (hereafter Cohen) (U.S. Patent No. 6011918), as applied in claim 13 above, and in view of Moulden et al. (hereafter Moulden) (U.S. Patent No. 7039912).

35. As per claim 18, Cohen teaches that invention substantially as claimed in claim 13. Cohen did not specifically teach wherein a class diagram described in UML.TM. is used as said system design information in said first and second processes.

Art Unit: 2195

36. However, Moulden teaches that wherein a class diagram described in UML.TM. is used as said system design information in said first and second processes (col. 12, lines 54-64).

37. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have combined the teaching of Cohen and Moulden because both of Cohen and Moulden invention directs to system for use in the software development area, and also it is well know in the art for one to use Modulden suggestion to describe class diagram in UML.

### ***Response to Arguments***

38. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

39. In order to expedite the prosecution of this application, examiner would like to suggest to applicant a possible allowable subject matter. For example, claim 13 maybe allowable if applicant incorporates the limitation of claim 16 and the specification paragraphs [0012], [0066] into the claim.

### ***Conclusion***

40. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (see PTO 892 form).

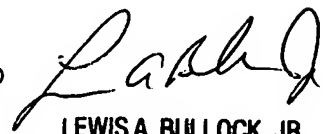
Art Unit: 2195

41. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer N. To whose telephone number is (571) 272-7212. The examiner can normally be reached on M-T 6AM- 3:30 PM, F 6AM- 2:30 PM.

42. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

43. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jennifer N. To  
Examiner  
Art Unit 2195

  
LEWIS A. BULLOCK, JR.  
PRIMARY EXAMINER